DETAILED ACTION

Priority

Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on 04/18/2004. It is noted, however, that applicant has not filed a certified copy of the 2004/125713 application as required by 35 U.S.C. 119(b).

Claim Objections

1. Claim 3 objected to because of the following informalities: There is lack of antecedent basis for "the light emitting element disposed region". Appropriate correction is required.

Claim Rejections - 35 USC § 112 – Second Paragraph

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 2 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. As for claim 2, the claim reads **a light emitting element disposed region that is a minimum region including the light emitting element projected on the semiconductor chip**. It is unclear as to how the light emitting element is being projected. Examiner reads the claim instead as **a light emitting element disposed region that is a minimum region where the** [light from the] **light emitting element** [is] **projected on the semiconductor**

chip. In other words, the light is being projected not the actual light producing part.

Correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 1, 2, 3, 5, 6, 7, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Otsuka (U.S. Patent 3,755,679) in view of Olschewski (U.S. Pat. 4,142,075).

8. As for claim 1, Otsuka teaches **a light emitting element having an electric signal terminal, that is driven to emit light by an electric signal given from outside to the electric signal terminal** (Otsuka, Fig. 1) **... a light emitting element driving circuit and a temperature detecting element that are made of a semiconductor** (Otsuka, Fig. 1; Col. 1, Lines 41 - 44)**, the light emitting element driving circuit outputting and**

applying the electric signal to the electric signal terminal (Otsuka, Fig. 1; Col. 1, Lines 41 - 46)**, the temperature detecting element detecting an ambient temperature** (Otsuka, Fig. 1; Col. 2, Lines 5 - 9)**, wherein the light emitting element … is driven based on the temperature detected by the temperature detecting element** (Otsuka, Fig. 1; Col. 1, Lines 41 - 57)**.** However, Otsuka fails to teach specifically that the **light emitting element is mounted on the semiconductor chip,** and that the semiconductor chip includes the driving circuit and the temperature detecting element. Olschewski teaches the **light emitting element is mounted on the semiconductor chip** (Olschewski, Col. 12, Lines 58 -62), and that the semiconductor chip includes the driving circuit and the temperature detecting element (Olschewski, Col. 12, Lines 49 - 55). It would have been obvious to one having ordinary skill in the art to mount the light emitting element on a semiconductor chip for the benefits allowed through modularization. Also, it would have been obvious to one having ordinary skill in the art to use a semiconductor chip that included the driving circuit and the temperature detecting element for the benefits allowed through miniaturization. The claim language **for driving the light emitting element** is considered intended use. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Therefore, **for driving the light emitting element** is given little patentable weight. If the intent of this language was to describe/indicate which semiconductor chip, please use a "first semiconductor chip", etc.

9. As for claim 6, it is similar in scope as claim 1 and therefore is rejected under the similar rationale.

10. As for claim 2, Otsuka further teaches **wherein at least part of the temperature detecting element is disposed in a light emitting element disposed region that is a minimum region including the light emitting element projected on the semiconductor chip** (Otsuka, Fig. 2; Col. 2, Lines 45 - 60)**.** It would have been obvious to one having ordinary skill in the art at the time of the invention to combine for the reasons mentioned above. The claim language **for driving the light emitting element** is considered intended use. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Therefore, **for driving the light emitting element** is given little patentable weight.

11. As for claim 7, it is similar in scope as claim 2 and therefore is rejected under the similar rationale.

12. As for claim 3, Otsuka and Olschewski teach the above limitations including **wherein the light emitting element driving circuit is formed in the semiconductor** chip. Olschewski further teaches **excluding the light emitting element disposed region** (Olschewski, Fig. 6) from the light emitting driving circuit. The definition given by the applicant in the specification states that the light emitting element disposed region is a minimum region including the light emitting element light projection. Therefore, the claim is requiring the separation of the light emitting element light projection and the light emitting element driving circuit. Olschewski teaches the exclusion of the light from the rest of the circuit via a compartment where the led is located. In addition, this exclusion could have been done by the mere arrangement of parts. This would have been obvious to one of ordinary skill in the

art at the time of the invention, since it has been held that rearranging parts of an invention involves only routine skill in the art. It would have been obvious to one having ordinary skill in the art at the time of the invention to combine for the reasons mentioned above. The claim language **for driving the light emitting element** is considered intended use. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Therefore, **for driving the light emitting element** is given little patentable weight.

13. As for claim 8, it is similar in scope as claim 3 and therefore is rejected under the similar rationale.

14. As for claim 5, Otsuka and Olschewski teach the above limitations, but does not teach specifically **a plurality of light emitting devices according to claim 1**. It would have been obvious to one having ordinary skill in the art at the time of the invention to take the apparatus covered in Otsuka and Olschewski and have **a plurality of light emitting devices according to claim 1**, since it has been held that a mere duplication of essential working parts involves only routine skill in the art.

15. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Otsuka (U.S. Patent 3,755,679) in view of Blalock (U.S. Patent 6,344,641).

16. As for claim 4 Otsuka teaches the limitations above, however Otsuka does not specifically teach **wherein the light emitting element is a plurality of visible light emitting elements that emit light at different wavelengths, and the semiconductor chip for driving the light emitting element drives the light emitting elements individually to**

maintain white balance of the plurality of light emitting elements based on the temperature detected by the temperature detecting element. Otsuka talks of the ability to use different wavelengths or colors (Otsuka, Col. 3, Lines 31 - 55). Also, it would have been obvious to one having ordinary skill in the art at the time of the invention to use multiple LED apparatus described in Otsuka, since it has been held that a mere duplication of essential working parts involves only routine skill in the art. Blalock teaches **wherein the light emitting element is a plurality of visible light emitting elements that emit light at different wavelengths, and the semiconductor chip for driving the light emitting element drives the light emitting elements individually to maintain white balance of the plurality of light emitting elements based on the temperature detected by the temperature detecting element** (Blalock, Col. 3, Line 62 – Col. 4, Line 21). It would have been obvious to one having ordinary skill in the art at the time of the invention to combine Otsuka with Blalock as controlling the LED operation via temperature determination of LEDs, since temperature variation in each LED will cause problems in maintaining the white balance in an RGB system. Also, the claim language **for driving the light emitting element** is considered intended use. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Therefore, **for driving the light emitting element** is given little patentable weight.

17. As for claim 9, it is similar in scope as claim 4 and therefore is rejected under the similar rationale.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAE K. KIM whose telephone number is (571)270-5066. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas Owens can be reached on (571) 272-1662. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JKK

/Tuyet Vo/

Primary Examiner, Art Unit 2821

June 03, 2008